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ABSTRACT

Projected teacher shortages are due to an expanding need and teachers leaving the profession. With the extreme pressures on beginning teachers, a large percentage of them leave the profession within their first 5-6 years. Causes for leaving the profession include school staffing actions; personal reasons; pursuing another job; and dissatisfaction. Teachers who are prepared in traditional teacher education programs and continue inservice education help ensure increased levels of student achievement. Beginning career and technical education (CTE) teachers face increased pressure to have a very wide range of knowledge and skills. Teacher induction programs (TIPs) are one answer to retaining and further developing the skills, satisfaction, and experience of beginning CTE teachers. Research on the experiences, concerns, and needs of beginning CTE and non-CTE secondary teachers leaves little room for controversy. The same needs have been identified repeatedly. Much needs to be done to help the newest teachers succeed, and much is known about how this goal might be accomplished. The payback of efforts made to conduct TIPs will be in higher job satisfaction, lower teacher turnover, and improved student achievement. Research is needed regarding the effects of teacher induction programs and the most effective means of addressing each area of need. (Appendixes include 75 references and a paper on elements and features of effective TIPs.) (YLB)

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Teacher Induction Programs:

A Strategy for Improving the Professional Experience Of Beginning Career And Technical Education Teachers

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Teacher Induction Programs: A Strategy for Improving the Professional Experience of Beginning Career and Technical Education Teachers

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FOREWORD

The primary purpose of this project was to gather and disseminate research findings about teacher induction programs for beginning secondary career and technical education (CTE) teachers, a topic of considerable importance to CTE professionals, policymakers, and researchers. This document is thus intended to be a resource for educators and education policymakers who wish to institute comprehensive and effective teacher induction programs designed to help ensure the success and retention of beginning CTE teachers. It is also intended to be a resource for researchers interested in extending our knowledge about teacher preparation and teacher induction.

The induction period, which lasts up to 5 or 6 years for most teachers, includes all of the teaching and professional activities and events experienced by beginning teachers from the time they sign their initial teaching contracts until they are fully and successfully acculturated into the profession. The primary goal of teacher induction programs is to enhance the initial professional experience of beginning teachers so they are successful and effective, and remain in the profession.

Effective teacher induction program designs are based on research that addresses the needs and concerns of beginning teachers. Researchers first investigated these needs in-depth in the 1980s. Data from these studies were used to inform the design and development of teacher induction programs. These programs have drawn considerable attention in recent years because of their apparent success in retaining teachers and enhancing student performance.

The increasing shortage of teachers should justify the implementation of induction programs that will assist beginning teachers successfully make the transition into the role of a professional career and technical education teacher. By using the latest available research findings and knowledge relating to the support and assessment of beginning teachers, we may be able to improve retention of promising novice career and technical education teachers. Regardless of current supply-and-demand issues, it is important to develop and disseminate (a) knowledge about the needs of beginning teachers and (b) effective programming for supporting and assessing the performance of beginning teachers.

Scholarship from many researchers can lead to stronger induction programs for all career and technology education teachers. Betty Heath-Camp, William Camp, and Richard Lynch provided the groundwork and programmatic efforts to expand our understandings and knowledge about the processes teachers experience as they prepare for and begin their teaching careers. These researchers and their protégés are applauded for their prolonged efforts addressing this critically important issue in career and technical education. Many scholars outside the field of career and technical education, including Leslie Huling-Austin, Sandra Odell, Barry Sweeny, and Gary DeBolt, have also served to expand the breadth and nature of inquiry and practice related to teacher induction. These scholars have learned and shared much about effective practices and programs for inducting beginning teachers, regardless of their pathways to licensure.

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CHAPTER I

A Rationale for Teacher Induction Programs

The United States is engaged in on-going economic competition that requires marketplace acceptance of products and services produced by highly skilled and knowledgeable workers. Well-qualified career and technical education (CTE) teachers are key to preparing high-achieving students and workers who will have challenging, well-paid jobs that help the United States maintain a dominant position in the world economy. Many of these workers gain their initial work-based employment skills and knowledge through enrollment in secondary CTE programs that are led by a shrinking supply of teachers. Unfortunately, many of our teachers leave the profession during their first 5 years in the profession. This high turnover has been a constant challenge in maintaining an adequate supply of experienced and effective CTE teachers.

Information regarding the scope of projected teacher shortages and factors that contribute to the difficulty of retaining teachers will initially be presented in this introductory chapter. After providing a rationale for strong teacher preparation programs and their effect on instructional quality and student achievement, the benefits of teacher induction programs will be discussed.

The Expanding Need for CTE Teachers

The U.S. Department of Education estimates that more than 2 million new teachers will need to be hired in the next decade (Help Wanted: 2 Million Teachers, 1999). Shortages, most acute in inner city and rural areas, are not uniform across fields. The greatest need is in special education, and there are also acute teacher shortages in science, mathematics, and career and technical education. Unfortunately, new and fully-trained teachers leave the field at a high rate, in part due to the common practice of giving the newest teachers the most difficult teaching and advising assignments. Noting the extreme pressures on beginning teachers along with a large percentage of new teachers leaving the profession within their first 5 to 6 years (Curtis, 1985; Jensen, 1986; Marso and Pigge, 1997), Feistritzer (1999) suggests that the traditional approach to bringing new teachers into the profession is akin to the profession eating its young.

Reasons Teachers Leave the Profession

Many education scholars agree the first year of teaching is exceptionally challenging (Huling-Austin, Odell, Ishler, Hay, & Edelfelt, 1989; Veenman, 1984) and may be one of the most difficult of all professions to master (Shulman, 1987). Few other professions expect the first-year practitioner to immediately perform at the same level as their experienced colleagues. This pressure results in a transition from student to first-year teacher that is traumatic for many and has been referred to in the literature as "reality shock" (Marso and Pigge, 1987).

Findings from a study of the general population of teachers (not limited to career and technical education teachers) conducted by Darling-Hammond (1997) revealed that approximately 15% of new teachers left the profession during each of the first 2 years of teaching. This was more than twice the annual national teacher attrition rate of 6.6%. These findings suggest attrition rates are higher for beginning teachers than beginning employees of other careers. Findings from a recent study of teacher turnover revealed that the overall annual

teacher turnover rate in the United States was 13.2% (Ingersoll, 1999). This compares to 11% for all employees and 12% for the field of nursing, which, like teaching, is predominantly staffed by women. In high-poverty urban schools, the rate of teacher turnover was 14.2%, and in small private schools it was the highest, at 22.8%. For those leaving the teaching profession (as opposed to moving to another school), 27% left due to retirement. Other causes included school staffing actions (12%); personal reasons such as pregnancy, health, family move, or family illness (45%); pursuing another job (24%); and dissatisfaction (35%). The most-often-cited reasons for dissatisfaction included poor salary (45%); lack of student motivation (38%); inadequate administrative support (30%); student discipline problems (30%); inadequate time to prepare (23%); and lack of faculty influence and autonomy (18%). Ingersoll (1999) also found the highest turnover among younger and older teachers, with those in the middle age groups most likely to be retained from year to year.

Though these statistics and perspectives are revealing and alarming, some educational researchers do not believe the alleged teacher shortages are overly grim. Feistritizer (1999) and Darling-Hammond (2000b) argue that media headlines suggesting a need for 2 million teachers are somewhat misleading. They contend that many teacher openings historically have been filled by individuals re-entering the teaching profession or entering it for the first time as older individuals. Retention statistics are somewhat skewed, too, by the cadre of experienced teachers who annually move from district to district. Regardless of the statistics, an abundant supply of well-prepared teachers is necessary to maintain a well-educated populace.

Well-Prepared Teachers are the Catalysts for Higher Student Achievement

Teachers who are prepared in traditional teacher education programs and continue in-service education help ensure increased levels of student achievement (Darling-Hammond, 2000b). In addition to completion of rigorous course work and intern teaching experiences in a quality preservice education program, classroom teaching experience is one of the major factors correlated with elevated levels of student achievement. Results from a 1998 study (SBEC Panel Request, 1998, as cited in State Board for Educator Certification, 1998) revealed a significant correlation between teacher experience and student achievement, as measured by a standardized test. Students of Texas teachers who had 5 or more years of experience had higher academic achievement scores on a state examination than did students of novice teachers. Prior reading achievement of students was the only factor that accounted for more variance than length of teaching experience. Others have found that high-standardized test scores can be achieved by students of teachers who have not been prepared in traditional teacher education programs (Stafford & Barrow, 1994). They reported that students of Texas teachers licensed through alternative routes achieved at the same levels as students of teachers prepared in traditional teacher education programs.

Effects of Changes in Career and Technical Education Upon the Expectations of New Teachers

Pre-service and beginning teachers are asked to navigate an array of ongoing changes. In addition to meeting university, state licensure, and professional requirements and standards, new career and technical education teachers are faced with the complexity of changing legislation, policies, philosophy, and practices of career and technical education.

The recent history of career and technical education reflects shifts in Federal funding and associated mandates to meet the needs of changing groups of targeted students. Perkins I legislation set aside the greater portion of CTE funding for students in special education and disadvantaged categories. As a result, enrollments of these students in CTE classes rose, while CTE participation of mainstream and college-bound students declined.

Until 1963, Federal policy concerning vocational education was primarily directed at educating immigrants and working-class individuals in the practical skills needed for farm work, factory employment, and home management. The Vocational Education Act of 1963 provided funding specifically to enhance the success of low-income students and disabled students in regular vocational education programs. Later amendments (1968 and 1972) expanded this focus to include bilingual students, postsecondary students, and those seeking to enter occupations that were non-traditional for their gender. In 1984, the Perkins Act (Carl D. Perkins Vocational Education and Applied Technology Act, often referred to as Perkins I) was passed, which sought to improve the quality of vocational programs and better serve students with special needs. Subsequent Perkins legislation (Perkins II and Perkins III) greatly broadened the scope of vocational education to improve both academic achievement and occupational skills in high school programs and in programs linking secondary and postsecondary education, including Tech Prep (Lynch, 2000). In addition, concern regarding the readiness of youth to enter the workforce led to the School-to-Work Opportunities Act of 1994, and the Workforce Investment Act of 1998. These legislative acts led schools toward higher involvement in partnerships with employers, in order to provide career exploration and work experience opportunities for students.

This evolution of vocational education has brought with it a dramatic shift in the skills needed by vocational educators. Until 1963, it was sufficient to be able to teach the skills of a particular occupation. Then it became important to have the ability to deal with a wide range of special populations—including disabled, disadvantaged, and students learning English as a second language. More recently, secondary career and technical educators have needed to play a role in improving academic skills such as reading, writing, and mathematics, while working with business partners and postsecondary institutions to prepare students for postsecondary education and entry into an ever-changing work environment. Beginning CTE teachers face increased pressure to have a very wide range of knowledge and skills.

Lynch (1996) points out that CTE teacher shortages are most apt to occur in "new or modified work-based education programs, technology, and technological applications" (p. 1) rather than in the traditional vocational areas in which college- or university-based teacher education programs are most available. For CTE teachers, the situation is further complicated by increased demands caused by the growth of career academies, Tech Prep programs, and other innovations resulting from Federal legislation (Finch, Kelly, Heath-Camp, Harris, Zimmerlin, & Aragon, 1999):

> The result is a greater demand for teachers with new capabilities. Foremost among these is facility at integrating academic and vocational studies, coordinating school- and work-based learning, and articulating secondary and postsecondary studies (p. 1).

As a result of these new demands, preservice preparation programs have been redesigned at some of the leading CTE teacher education institutions (Finch et al., 1999). At the University of California–Berkeley and at Virginia Polytechnic Institute and State University, programs preparing high school teachers have been redesigned. At the University of Illinois at Urbana-Champaign, training of community college instructors has been changed. Finch et al. state:

> In its own way, each of the universities has begun creating a reform process that focuses on preparing teachers to integrate academic and vocational studies, coordinate school- and work-based learning, and articulate secondary and postsecondary studies (p. i-ii).

Along with many employment opportunities outside the profession, the expectation for more broadly prepared teachers who have the ability to integrate the new and old into contemporary instruction and programming has created the need for ongoing professional development programs. Teacher induction programs for beginning career and technical education teachers may be key to meeting these expectations.

Teacher Induction Programs: One Professional Development Strategy Used to Successfully Bring Beginning CTE Teachers into the Profession

> The transition from novice to established teacher is too critical to be left to chance as it has been in the past. As teacher shortages developed during the 1990s (Wise, 1988), and as demands for reforms and improvement in education continue, there is a need to find a productive and effective way to assist the beginning teacher in making a smooth transition. What is needed is a structured, well-conceived, collaborative approach to induction assistance—based on research, educational theory, experience, and the best thinking that we can bring to bear on the problem (Camp & Heath-Camp, 1992a, p.1).

One strategy for developing and maintaining a cadre of quality beginning teachers is to provide quality teacher induction programs (Ryan, 1986; Debolt, 1992; Camp & Heath-Camp, 1992a; Darling-Hammond, 2000b; Odell, 2000; Odell & Huling, 2000; Sweeny, 2001). Many teacher induction programs focus on the instructional, professional, and personal needs of the beginning teacher once they have been hired for their first teaching position. The apparent success of early programs has resulted in widespread adoption of some or all parts of comprehensive teacher induction programs. The occurrence of state-level induction activities increased from 14 states in 1983 to 47 states in 1988 (Defino & Hoffman, 1984; Neuweiler, 1988). The percentage of beginning full-time public school teachers who participated in a formal induction program during their first year of teaching increased from 59% in 1993–1994 to 65% in 1998 (U.S. Department of Education, 1999a).

Teacher induction programs are believed to benefit beginning teachers, students, and employees in a variety of ways. Beginning teachers who receive ongoing support, performance evaluation, and professional development stay in the profession longer and have more positive attitudes toward teaching (Varah, Theune, & Parker, 1986; Henry, 1988; Odell & Ferraro, 1992) while continuing to develop their teaching effectiveness (Darling-Hammond, 2000c).

Pre-service education, teaching experience, and ongoing professional development of teachers are some of the major prerequisites for improved student achievement. Darling-Hammond (2000a) concluded that the evidence (Greenberg, 1983; Haberman, 1984; Olsen,

1985; Ashton & Crocker, 1986) of the last 30 years strongly suggests that fully prepared and certified teachers are more successful with students than teachers without preparation. Darling-Hammond stated:

> In fields ranging from mathematics and science to vocational education, reading, elementary education, and early childhood education, researchers have found that teachers who have greater knowledge of teaching and learning are more highly rated and are more effective with students, especially at tasks requiring higher order thinking and problem solving (p. 167).

Ferguson (1991) found that the expertise and knowledge of Texas teachers as measured by (a) basic skills and teaching knowledge, (b) advanced education as measured by completed masters degrees, and (c) teaching experience accounted for more of the interdistrict variation on mathematics and reading scores of grade-1-through-11 students than did the socioeconomic status of the students. The effects were almost entirely accounted for differences in the qualifications of the teachers. Fuller (1999) found that students of districts with higher proportions of fully licensed teachers were more likely to pass Texas achievement tests than districts with lesser proportions of fully licensed teachers. Strauss and Sawyer (1986) found that the higher the average teacher score on the National Teachers Exam, the higher the student pass rates on the North Carolina state competency exams. More recently, Fetler (1999) found a strong negative correlation between student scores and the percentage of Los Angeles teachers with emergency licenses. They concluded that test scores are teacher training issues. Though arguable, it is believed that students of properly prepared and professionally updated teachers will likely have higher achievement scores (Darling-Hammond, 2000a) and skill competence—thus strengthening their opportunities for postsecondary education and productivity in entry levels of employment.

Teacher induction programs often consist of a series of instructional, assessment, and support activities and processes that assist beginning CTE teachers to become effective teachers and student organization advisors (Camp & Heath-Camp, 1992a). Well-designed and implemented induction practices aspire to hasten the successful acculturation and socialization of teachers into the profession.

The Routes to Licensure Create Unique Induction Needs for CTE Teachers

The induction needs of beginning CTE teachers differ to some degree from the needs of other beginning teachers for two primary reasons. First, in addition to teaching in classroom and laboratory settings, new CTE teachers are also called upon as advisors of corresponding intracurricular student career- and technical-education organizations and as program managers of a variety of work-based programs that are integral components of quality CTE programs. Second, not all beginning CTE teachers become licensed through traditional teacher education programs. Some career and technical education teachers enter the profession through alternative certification pathways as described by Feistritzer and Chester (2000; see Appendix A). Different strategies for completing licensure requirements may lead to different levels of student achievement, beginning teacher needs, and retention outcomes.

Various options for preservice CTE teacher preparation also broaden the scope of induction needs of some new secondary CTE teachers. Trade and industrial teachers, for example, have historically entered the secondary teaching profession through alternative certification pathways. Because of the value placed upon recent and relevant occupational experience and skills, many teachers have completed licensure requirements using non-teacher education programs. Heath-Camp, Camp, Adams-Casmus, Talbert, and Barber (1992) found that, for such individuals, their early years of teaching resulted in somewhat different induction needs than CTE teachers prepared through traditional preservice teacher education programs.

In summary, teacher induction programs are one answer to retaining and further developing the skills, satisfaction, and experience of beginning CTE teachers. To address teacher shortages, retention is as important as increasing the supply of preservice teachers entering traditional and alternative certification programs through innovative recruiting programs.

CHAPTER II

RESEARCH FINDINGS RELATING TO THE NEEDS, EXPERIENCES, AND CONCERNS OF BEGINNING TEACHERS

The design and implementation of contemporary teacher induction programs should be based upon sound research. A variety of research studies and projects relating to the needs, concerns, and experiences of beginning teachers were conducted in the1980s and 1990s. After summarizing initial research relating to the induction experiences of beginning teachers, research conducted by career and technical education researchers will be highlighted in this chapter. The results of these investigations contain information that can be used to provide programming that meets the needs of beginning teachers.

Definition and Features of Teacher Induction and Teacher Induction Programs

Teacher induction is usually regarded as the aggregate of teacher experiences from the time they sign their first teaching contract until they are comfortably established as a professional teacher (Camp & Heath, 1988). Though the amount of time varies for each teacher, the induction process typically occurs over the first 5 or 6 years of teaching. Improved teacher competence, performance, and effectiveness are three of the primary goals of quality teacher induction programs (Mager, 1992).

Well-designed teacher induction programs help assure successful entry into teaching when they include the following four elements: (a) ongoing personal support; (b) assessment and feedback on teaching performance and progress, including provisions for self-assessment and reflection; (c) continuing education opportunities that address current needs, while building upon and enriching pre-service education; and (d) positive socialization into the profession (Howey & Zimpher, 1991). The designs of quality teacher induction programs have been informed by the research and knowledge produced by many scholars from both within and outside of career and technical education.

Experiences, Concerns, and Induction Needs of Beginning Teachers

Gardner (1983) reported that beginning teachers who did not complete teacher education programs were less confident, qualified, and competent than teachers who graduated from teacher education programs. Several studies found that new teachers often experienced difficulty with classroom management or discipline, student motivation, room and lesson organization, locating adequate teaching materials, understanding complex school systems and policies, and meeting the needs of individual students (Veenman, 1984; Griffen, 1985; Odell, 1986). In his meta-analysis of 83 studies from around the world, Veenman (1984) further identified that relationships with parents of students, insufficient time for preparation due to heavy teaching loads, relationships with colleagues, and effective use of alternative teaching methods also ranked as common sources of problems for beginning teachers. These early findings informed the formation of early teacher induction programs that were designed to address the needs of the beginning teachers. Lack of spare time, the burden of clerical work, and heavy teaching loads were also identified as additional critical concerns of beginning teachers (Ganser, 1999).

Though teacher induction programs were initially implemented to assist in socialization into the profession and improvement of teaching quality, beginning teachers who enrolled in teacher induction programs also improved in self-confidence and classroom management (Conner, 1984); lesson planning and managing classroom discipline (Eisner, 1984); and specific behaviors such as voice inflection, eye contact, and review techniques (Huling-Austin and Murphy, 1987). Research results also indicate that teachers involved in induction programs have more positive attitudes toward teaching and plan to continue in the profession longer than those who have not participated in induction programs (Varah, Theune, & Parker, 1986; Henry, 1988; Odell & Ferraro, 1992;). Darling-Hammond (2000a) suggests students are the direct beneficiaries of highly skilled and satisfied teachers, as reflected in higher levels of student achievement on standardized assessments.

Interest in early findings about the benefits of high-quality teacher induction programs led to the development of numerous induction programs across the United States (Sweeny, 2001). A report by the U.S. Department of Education (1999a) revealed that the percentage of beginning full-time public school teachers who participated in a formal induction program during their first year of teaching increased from 59% in 1993–1994 to 65% in 1998. The same report also indicated that 22% of the formal induction programs were 8 months or less in duration; 66% lasted 9 months to 1 year; and 12% continued for more than 1 year.

A number of researchers investigated the needs and concerns of beginning career and technical education teachers. Early research conducted by Camp and Heath-Camp (1989a) led to the development of the Teacher Proximity Continuum (TPC). This framework helped shape the foci of research efforts and the content of teacher induction programs.

The TPC was initially used to classify the problems, concerns, experiences, and challenges of beginning career and technology education teachers into eight categories.

The *internal* category of the teacher continuum encompasses the needs and challenges arising from factors within the teacher, such as personality variables. Items within the *pedagogy* category include experiences related to short-term planning, delivery, evaluation, and improvement of instruction. The *curriculum* category includes experiences related to the intermediate planning of course content and preparation for instruction. Program experiences are those that arise in conjunction with the long-term planning and operation of the department or program. The *students* category consists of experiences that result from exchanges with students. Experiences arising from contacts and exchanges with co-workers are categorized in the *peers* category. The *system* category encompasses experiences arising from individuals and forces within the educational system that require compliance. Experiences arising from outside the administrative and physical bounds of the educational system are part of the *community* category.

Heath-Camp, Camp, Adams-Casmus, Talbert, and Barber (1992) concurrently studied transcripts of 2 years of daily tape-recorded logs kept by 12 beginning career and technical education teachers. Each teacher recorded responses to a set of questions each school day, with additional questions included on the last day of each week. Five of the teachers were certified through traditional licensure routes (TEC) and seven through alternative pathways (NTEC). Heath-Camp et al. found the TEC and NTEC teachers, respectively, experienced a mean of 135.4 and 148.1 negative influences. Students were the highest proximity category of negative

experiences for both groups. Heath-Camp et al. reported that the negative influences indicated by the NTEC teachers were relatively higher than TEC teachers for the curriculum, pedagogy, peers, students, and system categories. In declining order, the student, system, and program were the categories with the greatest number of negative influences. Heath-Camp et al. reported that nearly 25% of the negative influences and 31% of the positive influences, could be assigned to the unique features of career and technical education.

Heath-Camp, Camp, Adams-Casmus, Talbert, and Barber (1992) also found that students were the source and category of the most positive influences experienced by beginning TEC (40.7%) and NTEC (64.5%) teachers. The student (31.4%), system (30.1%), and program (14.2%) categories were the proximity categories associated with the greatest proportion of significant events. Twenty-seven percent of the significant events were attributable to career and technical education. In sum, students were the source of the most negative and positive influences experienced by the beginning teachers.

Other researchers conducted studies during the 1990s that sought to identify the needs, concerns, and experiences of beginning career and technical education teachers. Mundt (1991) found that the most notable teacher problems and concerns of beginning agricultural education teachers were the conditions of the physical facilities; classroom management issues; organizational issues; managing vocational student organizations; a need for more supervision and help from the principal; and determining curriculum scope, sequence, and pace. Mundt found that the beginning teachers were quiet, frustrated, isolated, afraid, angry, confused, and generally lacking in confidence.

Heath-Camp, Camp, Adams-Casmus, Talbert, and Barber (1992) conducted a national survey of beginning vocational teachers in the U.S. and found that many schools provided support activities for beginning career and technical education teachers. However, nearly 25% of the beginning teachers were not given a curriculum guide and 25% were never observed or visited by the principal during their first year of teaching. They found that the forms of assistance that had the greatest impact on the beginning secondary teachers prepared in traditional teacher education programs were: (a) having an adequate supply of materials, textbooks, and workbooks; (b) availability of planning time before the start of school; (c) helpful feedback and evaluation from the principal; (d) orientation to school policies; (e) information on how to secure supplies and equipment; (f) an extra planning period; and (g) parental support. They also concluded that the nature and impact of many of the events experienced by beginning teachers reflect common experiences of individuals progressing through the exploration-trial and establishment-trial sub-stages of vocational development as conceptualized by Super, Crites, Hummel, Moser, Overstreet, and Warnath (1957).

In case studies of three beginning agricultural education teachers, Talbert, Camp, and Heath-Camp (1994) found the primary teacher concerns included a need for knowledge and skills related to effective classroom management, advising the Future Farmers of America (FFA) chapter, preparing for multiple classes, managing the laboratory, ordering supplies, time management, and lesson planning.

Garton and Chung (1996; 1997) examined the in-service needs of 37 first- and second-year Missouri agricultural education teachers. Of the 50 professional competencies listed, they determined that teachers needed in-service education to address 12 of the competencies. The 12 competencies included: completing reports for local/state administrators; motivating students to learn; preparing FFA degree applications; developing an effective public relations program; preparing proficiency award applications; teaching agriscience; utilizing a local advisory committee; developing supervised agricultural experience opportunities for students; using computers in classroom teaching; supervising the supervised agricultural experience programs of students; teaching via experiments; and conducting local FFA activities. Technical skills were not viewed as the most important topics for in-service education for this cohort of beginning teachers.

Nichols and Mundt (1996) completed a nationwide study that was designed to determine which of 70 competencies within 11 broad categories were considered most critical for the survival of beginning agricultural education and family and consumer science teachers. The 11 broad areas were classroom control, safety, instruction, student uniqueness, administration, program development, community outreach, socialization, professional development, student vocational organizations, and summer programs. Beginning teachers, teacher educators, building principals, and agricultural education and family and consumer science state supervisors ranked the classroom management and safety categories of competencies first and second in importance. Principals ranked instruction as the third most important category.

Mullennex (1996) examined the differences in induction practices between 156 beginning and 247 experienced business education teachers in the southern region of the United States. Though not all schools had induction programs, findings from beginning business education teachers indicated that the five most helpful induction practices, in order, were: peer support group for beginning teachers; handbooks for beginning teachers; reduced teaching load; specialized program orientation; and classroom observation of other teachers. Mullennex found the goals of teacher induction programs believed to be most important by beginning teachers, were, in order: teacher retention; socialization; assessment and evaluation; and personal and professional development. Student motivation, classroom discipline, time organization, access to resources, and access to materials were the top five trouble areas remaining at the end of the year for the 156 beginning teachers.

Kirby and LeBude (1998) investigated the nature of teacher concerns and effective induction practices of a group of 84 North Carolina teachers with 5 or fewer years of experience who taught in agriculture (27), health occupations (44), and exploring biotechnology (13) program areas. Using findings from the researcher-designed Concerns Questionnaire, they found the teachers were moderately concerned about measures related to self, task, and impact as described by Fuller (1969). Kirby and LeBude concluded that teachers entering teaching from alternative licensure routes had more concerns than those entering through traditional teacher education programs. Five retention strategies found to have the greatest impact were: adequate supply of materials, textbooks and workbooks; adequate facilities; provisions for reimbursement for continuing education; a positive work environment; and effective student discipline policies that were endorsed and upheld by school administrators.

In a study of state winners of the National Vocational Agriculture Teachers Association's Outstanding Young Member Award, Mundt and Connors (1999) found the young members experienced many of the same concerns reported by other beginning teachers. The primary concerns of the young members were: managing the overall activities of the local FFA chapter; building support within the school system; balancing professional and personal responsibilities; recruiting and motivating students in agricultural education; using proper classroom management strategies; time management; organizing and managing safe and attractive facilities; and building support from parents, organizations and adult groups within the community.

Edwards and Briers (2000) divided a list of 163 teaching competencies for beginning Texas agricultural education teachers into the following areas: facilitating student learning in classroom and laboratory settings; facilitating student leadership and personal growth; facilitating student agricultural experiences; student service competencies; program management competencies; personal roles and relationship competencies; and planning and managing educational tools and technologies. After combining the individual teacher scores regarding their views of the levels of importance of the competencies and their personal competence, Edwards and Briers concluded that in-service education should be offered to assist entry-phase teachers in the areas of facilitating change in curriculum and technologies, facilitating balance in personal and professional roles, facilitating public image, and facilitating student leadership growth.

Joerger and Boettcher (2000) investigated the desired forms of assistance of 23 beginning Minnesota agricultural education teachers. They concluded that: (a) The forms of assistance provided by local school district personnel that had the highest perceived impact on the beginning agricultural education teachers included parental support, availability of materials and textbooks, planning time, curriculum guides for the program, and feedback from the principal; (b) Accommodations made for an additional planning period each day would have made a major impact on the initial teaching experience of the beginning teachers; (c) Events related to student management, student respect, self-confidence, personal satisfaction, student success, support from the principal, and workload were perceived by beginning teachers as having a major impact on their initial teaching experience; (d) The beginning agricultural education teachers experienced a high level of stress during the first 7 to 8 weeks of the school year, and concurrently experienced a moderate amount of job satisfaction; and (e) The nature of the highest-ranking forms of assistance, events, and elevated stress levels of the beginning agricultural education teachers of this study reflected the usual levels of concerns, experiences, and needs expressed by individuals transitioning into the exploratory-trial and/or establishment-trial sub-stages of their careers (Super, Crites, Hummel, Moser, Overstreet, & Warnath, 1957).

Concerns and Induction Needs of Alternatively Certified Career and Technical Education Teachers

Practitioners are concerned about how to fill secondary career and technical education teaching vacancies, as well as how to retain quality beginning teachers prepared through alternative pathways. To date, there is limited research related to the induction needs of alternatively certified career and technical education teachers. Though beginning teachers have different pathways leading to teaching in the secondary classroom, the majority of induction needs of alternatively certified teachers are similar to those of traditionally certified teachers (Heath-Camp, Camp, Adams-Casmus, Talbert, & Barber, 1992). Heath-Camp et al. (1992)

conducted a study with quantitative and qualitative elements involving 33 non-teacher education certified (NTEC) teachers from across the United States who entered vocational education based upon occupational experience or technical degrees instead of preparation through a traditional teacher-education degree program. The average age of the predominantly married participants (82%) of the cohort was in the mid-30s. With nearly an equal number of females (18) and males (15), the cohort had an average of 1.5 children, and had work experience that ranged from 5 to 35 years. Nearly two-thirds (21) completed bachelors degrees, and their teaching experience ranged from a few weeks to 2 or more years. Focus group interviews resulted in a list of frequently occurring needs for the beginning NTEC teachers.

The most important forms of assistance needed at the beginning of their first year of teaching included: (a) a mentor in the same or related instructional area and a support group; (b) curriculum, identification of resources, a record of helpful tips, and instructional materials from the previous instructor; (c) an orientation to the career and technical student organization; (d) orientation to system workings, policies, and procedures; (e) more preparation time before the beginning of courses; and (f) access to a variety of workshops when needed. The forms of assistance they desired during the school year included: (a) a continuous orientation program that addressed all aspects of teaching; (b) a handbook for first-year teachers that included a list of resources and supplies; and (c) a help hot line for new and beginning teachers.

Summary and Conclusions

The needs of beginning secondary CTE teachers are similar in many ways to those of beginning secondary teachers in general. Needs of beginning secondary CTE teachers that reflect the common needs of beginning secondary teachers in all fields include the development of skills to address classroom management issues, student motivation, instructional methods, and personal time management. Methods of addressing these needs that are proven or promising include handbooks, mentors, orientation programs and materials, and specific training in the area of pedagogy. Alternatively certified teachers, on the whole, need even more of the same types of support.

Areas of special need for CTE teachers include managing career and technical student organizations; concerns related to equipment and laboratories, including safety issues, adequacy of equipment, maintenance of equipment, and ordering equipment; and developing or maintaining community support (as might be needed for career exploration activities in the community).

Some of the identified needs of beginning CTE teachers can be addressed through induction programs. Orientation to school policies is one example. Other areas of need ought to be considered as critical areas for enhanced pre-service education. The pervasiveness of student discipline, student motivation, and classroom management as problems for traditionally or alternatively certified beginning teachers suggests that colleges of education and alternative certification programs need to further strengthen the skills and understandings of prospective teachers in these areas.

Much can be done to help beginning CTE teachers. However, if the focus remains solely on improving the competencies of the teacher, only a portion of the possible improvement in teacher effectiveness, satisfaction, and retention will be achieved. No matter how well prepared a beginning teacher is, he or she must operate within a system. Federal, state, union, district, and school policies and practices have a real impact on the ability of teachers to function effectively. Some of the problems and barriers identified by research on the needs of beginning teachers can only be addressed by changing the system and teaching environment. For example, outdated equipment or a lack of textbooks should be addressed as a system issue at the school or district level. Similarly, good classroom management skills are most successful in an environment where teachers are supported by school discipline policies that are well-thought-out and are consistently supported by school administration. People who leave the teaching profession during their first years of teaching include not only those who are unsuccessful in the classroom, but also many who are considered to be very good teachers. The fact that many of those leaving are judged to be capable and competent teachers suggests that there are systemic problems that must be addressed in order to recruit and retain good teachers.

The research on the experiences, concerns, and needs of beginning CTE and non-CTE secondary teachers leaves little room for controversy. The same needs have been identified repeatedly. It is clear that much needs to be done to help our newest teachers succeed, and much is known about how this goal might be accomplished. The payback of efforts made to conduct induction programs will be in higher job satisfaction, lower teacher turnover, and improved student achievement.

CHAPTER III

RECOMMENDATIONS FOR PRACTICE AND RESEARCH

Many stakeholder groups, individuals, and organizations affiliated with career and technical education (CTE) influence the induction experience of beginning teachers. These groups include school administrators; state directors and program specialists; teacher educators; leaders and partners of teacher induction programs; colleges of education; mentors; alternative certification program leaders; licensure bodies; policy-makers; and beginning teachers themselves. In order for each of the stakeholder groups to be helpful in improving the early experiences of teachers, they need to develop an awareness of the needs, experiences, and concerns of beginning teachers as revealed by the research, and accept responsibility for making improvements within their own realms of influence.

How can the research be used to inform the attitudes and practices of stakeholders who are involved in the preparation and professional development of teachers? Coordinators of beginning teacher programs, as well as teacher educators, colleges of education, school administrators, and others who work with traditionally and alternatively certified pre-service teachers need to highlight and expand the emphasis upon topics within the classroom and clinical instruction relating to self, pedagogy, curriculum, program management, community, and the nature of students. See Table 1 for the topics of emphasis identified in the literature.

School administrators, legislators, teacher association leaders, and others who have influence upon the policies and practices of school operation and staff development also need to be aware of the needs and concerns of beginning teachers. They can exert considerable influence in the formulation and implementation of policies, practices, and programs that contribute to optimal teaching experiences for novice educators. Table 2 displays the activities policymakers can promote to help achieve a more satisfying experience for beginning teachers.

Table 1.
Topics of Emphasis for Selected Categories of the Needs of Beginning Teachers

Category	Topics
Self (Internal)	Managing time effectively. Developing organization skills. Maintaining a healthy perception of self. Developing and maintaining self confidence. Developing and maintaining a positive attitude toward teaching activities and role. Balancing personal and professional responsibilities.
Pedagogy	Organizing and designing effective lessons. Organizing facilities for effective learning. Managing instruction in laboratory settings. Locating teaching materials. Managing the classroom. Preparing for and meeting the individual needs of students. Using alternate teaching methods and strategies. Preparing for multiple courses. Soliciting support and help from administrators. Using results from principals to enhance teaching performance. Maintaining a safe learning environment. Securing instructional resources and materials. Advising and managing career and technical education student organizations.
Students	Motivating students. Disciplining students.
Curriculum	Determining the scope, sequence, and pace of courses.
Program	Completing clerical tasks in a timely manner. Maintaining a supply of current equipment, supplies, facilities, and materials. Securing, organizing and managing safe and attractive facilities.
System	Negotiating for a manageable teaching load. Advocating for needed funding and support.
Community	Establishing relationships with the parents or guardians of students. Establishing support from parents, organizations, and adult groups in the community.

Note: Categories of the Teacher Proximity Continuum developed by Camp and Heath-Camp (1989a).

Table 2.
Activities of Policymakers for Optimizing the Experience of Beginning Teachers

Category	Activities
Peers	Facilitate activities that foster the development of collegial relationships with teacher colleagues.
System	Create convenient and clear ways for understanding complex school systems and policies.
	Provide adequate time and resources to prepare for initial teaching assignments.
	Provide instruction on effective time management.
	Provide suggestions and assistance to lighten the burden of clerical work.
	Provide program-specific and general school orientations.
	Limit the number and scope of extra teaching duties.
	Clarify the process of formal observations and evaluations conducted by district personnel.
	Provide quality facilities and materials for classroom and laboratory instruction.
	Serve as an advocate and promoter of beginning teachers and their programs.

Note: Categories of the Teacher Proximity Continuum developed by Camp and Heath-Camp (1989a).

Stakeholders in policymaking and administrative roles should be involved in the creation, support, and promotion of comprehensive professional development programs. Carefully designed teacher induction programs that specifically address the needs of beginning teachers should be created as the initial component of resident professional development programs. After obtaining information about the characteristics and needs of each beginning teacher, induction programs should be customized and individualized, whenever possible, to meet the unique needs of each teacher. Desirable benefits may be realized by program stakeholders when the components of an induction assistance model, implementation system, and recommended practices are implemented in a complete manner.

Camp and Heath-Camp developed a wide variety of quality materials for establishing and implementing a comprehensive beginning teacher induction program. Their materials are based upon sound research and actual use with career and technical education teachers (Camp & Heath-Camp, 1989a; Camp & Heath-Camp, 1989b; Heath-Camp & Camp, 1990a; Camp, Heath-Camp, & Adams, 1992a; Camp, Heath-Camp, & Adams, 1992b; Camp, Heath-Camp, & Adams, 1992c; Camp, Heath-Camp, & Adams, 1992d; Heath-Camp & Camp, 1992a; Heath-Camp & Camp, 1992b; Heath-Camp, Camp & Adams, 1992c; Heath-Camp, Camp & Adams, 1992d; Heath-Camp, Camp & Adams, 1992e; Heath-Camp, Camp, Adams-Casmus, Talbert, & Barber, 1992). Refer to Appendix B for details of the induction assistance model and components of their teacher induction program.

Sweeny (2001) provides a recently designed blueprint for contemporary induction programs. In addition to resources in his text, he provides many free materials on his Web site. He brings together many of the best practices, research, and theory into a framework that can be used to tailor a quality induction program.

Research Recommendations:

Previous research has identified the needs and concerns of beginning teachers, and models for teacher induction programs have been developed. The most comprehensive of these for career and technical education was developed by (Heath-Camp, Camp, and Adams, 1992d). However, little is known about the extent to which teacher induction models have been implemented in CTE, or the results of such efforts. Similarly, while many system-level issues affecting new teachers have been identified, little is known about the relative importance of system change in improving experiences and outcomes for beginning teachers and their students. It is also important to understand how improved teacher induction interacts with system-related issues. Improving the environmental conditions within which teachers work may be just as important as improving teacher induction practices, but data are lacking on this question.

Another area for future research is to determine the most effective means of addressing each area of need. Many of the identified needs of beginning teachers might best be addressed in pre-service classes, in the student teaching setting, or during the induction period—through classes, evaluation, mentoring, or other methods. Other identified issues may prove difficult to remedy through these methods, and the recruitment and selection process may need to be examined.

More research is also needed about the impact of some of the categories of variables noted in the Teacher Proximity Continuum (Camp & Heath-Camp, 1989a). For example, variables related to community (e.g., urban vs. rural, income level, diversity) may have an important impact on new CTE teachers, but these are not well-understood in terms of induction needs.

Given the intensifying interest in improving the effectiveness and retention of CTE teachers, it is unfortunate that prior research and model programs have not led to systematic implementation, and subsequent evaluation, to verify effectiveness. This work is critically important, and remains to be done.

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APPENDIX A
TYPES OF ALTERNATIVE CERTIFICATION (FEISTRITZER & CHESTER, 2000)

Class A: The program has been designed explicitly to attract individuals who already have a bachelor's degree in a field other than education into elementary or secondary school teaching. The program is not restricted to addressing shortages, and is not restricted by secondary grade level or subject area. Class A programs involve teaching with a trained mentor, and include formal instruction dealing with the theory and practice of teaching during the school year—and sometimes during the summer before and/or after the academic year.

Class B: These are teacher certification routes that have been designed to attract individuals into teaching who have completed at least a baccalaureate degree in teaching. Mentoring and formal instruction are part of the program. However, states with Class B programs restrict the programs to addressing shortages, or restrict secondary grade levels and/or subject areas included in the program.

Class C: These routes use review of academic and professional background and transcript analysis. Candidates participate in individually designed in-service training and course-taking to reach competencies required for certification, if these are deemed applicable. Program design is the responsibility of the state and/or the local school district.

Class D: Like Class C, except program design is the responsibility of an institution of higher education.

Class E: Post-baccalaureate programs at an institution of higher education, with on-campus courses.

Class F: Emergency certificates or waivers that allow the individual to teach, most often without any on-site support or supervision, while taking traditional teacher education courses needed for full certification.

Class G: Programs certifying individuals who are close to completing certification through the traditional teacher education route. These include individuals moving from one state to another and those certified in one endorsement area who are seeking certification in another endorsement area.

Class H: Routes that enable certification of people with special qualifications, such as well-known authors, to teach specified subjects.

Class J: Routes that are intended to eliminate emergency routes by preparing individuals who don't meet basic requirements to become qualified to participate in an alternate or traditional route leading to teacher licensing.

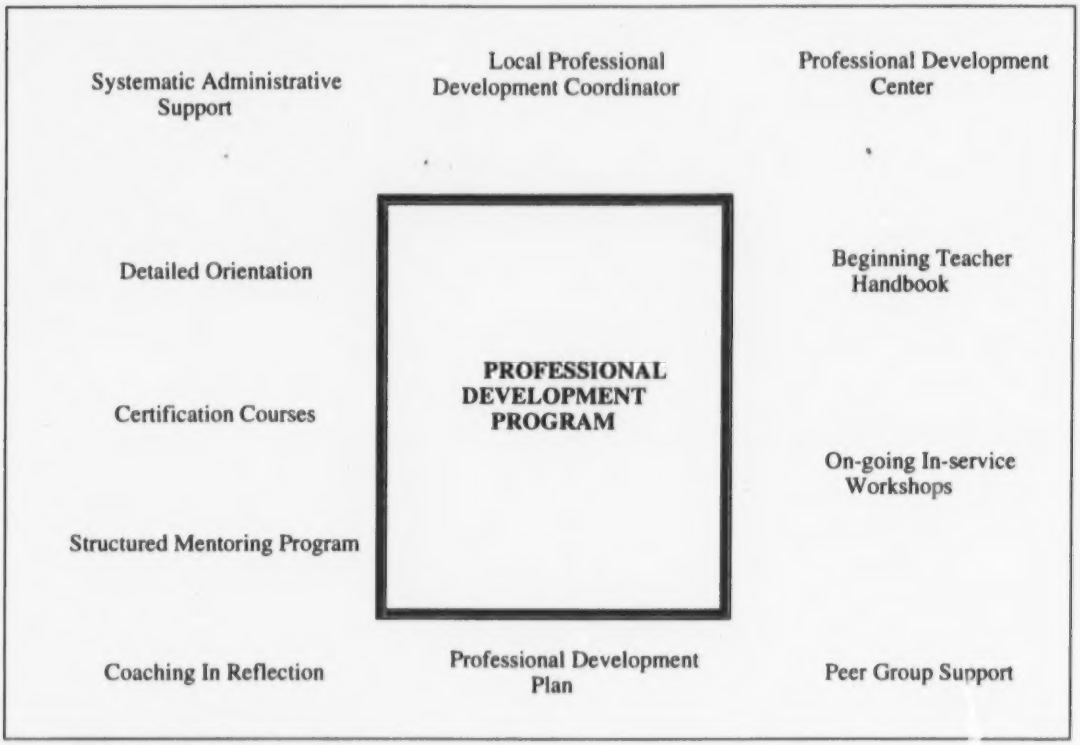
APPENDIX B
ELEMENTS AND FEATURES OF EFFECTIVE TEACHER INDUCTION PROGRAMS

The importance of providing a quality teacher induction program for career and technical education teachers is summed up by the following quote from Heath-Camp and Camp (1992a):

> These suggestions can do much to help the beginning teacher move successfully through their first year—the beginning of their lifetime of mastering the teaching profession. As we have noted, great volumes of research, experience, and common sense speak to the difficulties in becoming an expert teacher. In addition, all vocational education teachers face tremendous expectations placed on them by students, administrators, parents, businesspersons, state staff, fellow teachers, and teacher educators. Encouraging the experienced vocational educator to assist a beginning teacher, then, will affect not only the success of one teaching career, but also the future of vocational education.

Research and experience are requisites of a quality induction program for the 21st century. The following induction assistance model was designed to address the needs, experiences, and concerns of beginning teachers that were identified in the research and organized by the framework within the Teacher Proximity Continuum developed by Camp and Heath-Camp (1989a).

Components and practices for a contemporary career and technology education teacher induction program should be derived, in part, from the model in the chapter titled, "A Model Induction Assistance Program for Beginning Vocational Teachers" from the publication *On Becoming a Teacher: An Examination of the Induction of Beginning Vocational Teachers in American Public Schools* by Heath-Camp, Camp, Adams-Casmus, Talbert, and Barber (1992). Camp, Heath-Camp, & Adams (1992 a, b, c) authored a resource manual for the professional development center and guides for use by the local professional development coordinators and administrators. Heath-Camp, Camp, and Adams (1992) developed separate handbooks for the beginning teacher and the mentors. The model induction assistance in Figure 1 consists of 11 major components (Heath-Camp, Camp, Adams-Casmus, Talbert, and Barber, 1992). They recommend full implementation of the model whenever possible. When full implementation is not possible, they suggest the model be used as a guide for tailoring local programs. A brief description of each component of the model is provided in order to further illustrate how a comprehensive program may function.



Source: Adapted from Heath-Camp et al. 1992.

Figure 1. Components of the Induction Assistance Model.

Beginning Teacher Handbook

Each participant in the teacher induction program should receive a handbook. Attractively packaged and appointed with a user-friendly table of contents, each handbook should contain information regarding the teacher induction program, calendars of activities, directories of persons to contact, materials for teacher induction activities, listings of teaching resources, and open sections for inserting information received at program workshop activities. The handbook developed by Heath-Camp, Camp, and Adams (1992c) is titled *Professional Development of Beginning Vocational Teachers: Beginning Vocational Teacher Handbook.*

Detailed Orientation

Beginning teachers desire and need appropriate amounts of information about the school system, its programs, and their department on a regular and as-needed basis. A process for delivering needed materials and information in a timely manner is important to the successful induction of beginning teachers. Beginning teachers also need to complete an orientation to all aspects of the teacher induction and other professional development programs supported by the institution.

Structured Mentoring Program

Carefully selected and properly trained mentors are key to the success of beginning teachers. Mentors that are part of an in-school induction program should receive appropriate remuneration in the form of release time, reduced loads, stipends, or a combination of these benefits. Not every successful teacher will and can be an effective mentor. Mentors need to be successful teachers who can be supportive and encouraging to new teachers. They need to be empathetic, honest, and sensitive to the personal, professional, and instructional needs of the new teacher. On-going training will help ensure that mentors will be effective on a continual basis. Mentors need to be aware of research concerning the needs of beginning teachers, as well as the developmental processes and techniques of coaching. In addition, they need copies of the materials the beginning teachers receive. A resource for use by mentors written by Heath-Camp, Camp, and Adams (1992d) is titled *Professional Development of Beginning Vocational Teachers: Mentor Guide.*

Mechanisms for Teacher Peer Support Group

A teacher peer support group designed for attendance only by beginning teachers may yield many benefits. Meetings are designed to facilitate sharing experiences and discussion of solutions to common challenges facing the beginning teachers. Restricted computer listservs, with participation limited to the beginning teachers, also serve as effective forums for discussing common problems, successes, and helpful resources.

Systematic Administrative Support

Support from the local school, state department of education, teacher education institution, and professional administrators' organization is necessary if the teacher induction program is to function effectively. Administrators need to be informed about the nature and requirements of the induction program. Likewise, they need to be kept current on recommended practices for working with, supporting, providing constructive comments to, and assessing the progress of the beginning teachers. Administrators can be more effective when they are asked to be supportive, and are provided periodic information about induction program schedules, activities, and evaluations. A resource for use by administrators written by Camp, Heath-Camp, and Adams (1992c) is titled *Professional Development of Beginning Vocational Teachers: Administrator Guide.*

Professional Development Center (PDC)

The primary use of a Professional Development Center (PDC) is to serve as the site for centralizing and staging the activities of a professional development program for beginning teachers. The PDC can also be designed to meet the professional needs of experienced instructors. Provided with funding from an assortment of fiscal partners (i.e., local school district, consortia, state department, legislative sources, outside sponsors, university resources), the PDC should be staffed with a professional development (or teacher induction) coordinator who maintains a cooperative and collaborative relationship with a partnering teacher education institution.

Professional Development Coordinator

The professional development coordinator of a local program or consortium should be a successful teacher who can provide quality leadership while coordinating, organizing, and facilitating effective teacher induction and in-service programming. Concurrent with receiving ongoing training about their roles, activities, and induction theory and practice, the coordinator has the responsibility of organizing and conducting quality induction programming. Functions include enrolling beginning teachers; selecting and organizing the training of mentor teachers; coordinating workshops and in-service activities for the beginning teachers; and collaborating with teacher education institution representatives, professional organizations, outside sponsoring agencies, and state department representatives in identifying, designing, and delivering appropriate workshops and related activities.

The coordinator also has the important role of creating partnerships and linkages with teacher education institutions. Coordinators can be instrumental in arranging graduate and continuing education credit for in-service activities, workshops, and formal university-level courses. Additional roles of coordinators of career and technical education teacher induction programs are described in the *Professional Development of Beginning Vocational Teachers: Local Professional Development Coordinator Guide* (Camp, Heath-Camp & Adams, 1992b).

Certification Requirement Monitoring

Alternatively and provisionally certified teachers are often required to complete a series of courses and activities, if they are to maintain their license. The program coordinator can assist beginning teachers with identifying potential courses that meet certification requirements.

Promotion of Reflection Activities

Beginning and experienced teachers can value greatly from reflecting upon their teaching activities and experiences. Beginning teachers need guidance and coaching in order to practice and benefit from reflection activities. In-service time can be used to promote the benefits of reflection.

Professional Development Plans

Professional development plans feature the desired short, intermediate, and long-term professional goals of the teacher, as well as strategies to meet the goals. Goals are designed to address the development of various teaching skills, participation in school and professional organizations, and professional development.

A Collaborative Approach

Before putting all the components in place, it is important to gain the support of a number of interested partners. A comprehensive induction program for career and technology education teachers, therefore, needs to consist of at least four active partners, as portrayed in Figure 2.

State Dept. of Education	Outside Funding Source	Professional Organizations	Local School Systems	Teacher Education Institutions

Source: Adapted from Heath-Camp, Camp, Adams-Casmus, Talbert, & Barber (1992).

Figure 2. Supporting Partners of an Effective Career and Technical Education Teacher Induction Program.

These include professional organizations, state department of education personnel, local school systems, and teacher education institutions. A fifth party—outside funding sources—may also be needed if the program is to achieve its goals.

In-service Workshops

Workshops should be based upon initial and periodic assessments of the needs of the beginning teachers. Information should be obtained from quality assessments that are based upon research, anecdotal evidence, elements of other teacher induction assessments, and the direct participant input. The key is to provide programming that beginning teachers desire, in formats that are meaningful, and at times and locations that are safe and convenient.

Workshops should be offered and structured to address the current and upcoming needs of the teachers. In a program with a large number of participants, multiple offerings in different locations may be warranted. Workshops need to be held during school hours, whenever possible, and feature an appropriate balance between times for sharing, reflection, and direct instruction.

Approaches to Meeting the Induction Needs of Beginning Teachers Without Traditional Teacher Education Preparation

Research concerning the most appropriate approach to teacher induction for beginning teachers without traditional teacher education preparation needs to be expanded. The following recommendations reflect findings from the studies completed by Camp and Heath-Camp, and the personal experience and judgement of the lead author.

Needs are likely to vary among alternatively certified teachers, depending on the conditions under which they were certified. Feistritzer and Chester (2000) surveyed use of alternative certification nationally, and developed nine categories of alternative certification. These categories are described in Appendix A. The categories are:

Class A: Post-Baccalaureate Unrestricted

Class B: Post-Baccalaureate Shortage

Class C: Life Experience Non-University

Class D: Life Experience University

Class E: Fifth Year

Class F: Emergency

Class G: Traditional Incomplete

Class H: Special Qualifications

Class J: Non-Emergency Route

Teacher induction strategies for teachers certified through alternative certification programs should be based upon generally accepted induction practices. CTE teachers certified through Fifth Year programs are likely to have needs similar to those of traditionally certified teachers. Teachers certified through Traditional Incomplete programs may have needs related to specific areas they have not yet studied, but should also be quite similar in their needs to the traditionally certified. Teachers certified through Post-Baccalaureate and Life Experience programs will likely have extensive induction needs in areas not addressed in their limited pre-service background and training. The formal and informal training experienced by these individuals may

or may not adequately address their areas of need. Teachers participating in the Post-Baccalaureate programs have the advantage of a mentor, who at least has the potential of helping them fill in gaps in knowledge or technique in a timely manner. Those in the other categories will have greater need of personal, on-call support, whether through a mentor or a peer. Those without local mentors (Life Experience, Fifth Year, Emergency, Traditional Incomplete, and Special Qualifications), and those whose program is not the responsibility of the local school district (all categories except Life Experience Non-University), will have the most need of a handbook explaining the local system.

Alternatively certified teachers who have had the least opportunity to observe master teachers (Life Experience, Emergency, and Special Qualifications) will likely be the most in need of pedagogical assistance, classroom management assistance, and opportunities to observe and be observed by master teachers. Those most in need of all types of assistance will be teachers with Emergency certificates who are minimally qualified in other respects. Teachers entering with a Special Qualifications designation are less likely than others to need assistance with subject matter, but they may be in greater need of other types of assistance.

Though limited, research findings suggest the types of assistance need by alternatively certified teachers are similar to the needs of traditionally certified teachers, even though both groups have unique concerns. Because alternatively certified teachers are older, as a group, than traditionally certified teachers, they are likely to be more mature and have fewer problems being seen as authority figures in the classroom. They may have extensive subject matter knowledge and skill acquired in the workplace that equals or surpasses that of traditionally certified teachers. The alternatively certified may have more needs, however, in those areas where traditional certification programs offer heavy emphasis, such as pedagogy and classroom management skills. A high-quality teacher induction program will anticipate the varied needs of traditionally and alternatively certified teachers, and will make available a variety of assistance tailored to the needs of individuals.